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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,826	03/16/2001	Larry D. Smith	5181-71501	5952

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EXAMINER

DINH, TUAN T

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/809,826

Applicant(s)

SMITH ET AL.

Examiner

Tuan T Dinh

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) 12 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-11,13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election without traverse of Group I and Specie II (claims 1-2, and 4-17-figures 2, 4, and 5) in Paper No. 4 is acknowledged.

Claims 12 and 14 do not read in Specie II; therefore, claims 12 and 14 are withdrawn from further consideration as non-elected subject matter.

Claims 3, and 18-34 are canceled without prejudice. The pending claims now are 1-2, 4-11, 13, and 15-17.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-2, and 4-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of co-pending Application No. 09/809,837, and also over claims 1-34 of co-pending Application No. 09/809,838. Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations of the claims 1-24

(09/809,8370) and claims 1-34 (09/809,838) are encompass the limitations of the instant claim 1-2, and 4-17.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **cross-hatching** of the drawings must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “**stiffener** for mounting the voltage regulator module, claim 15, lines 1-2” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 10-11, it is unclear. Applicant recites in claim 1 that “the power laminate including at least one power plane and at least one reference plane” but in claim 10, applicant recites that “the power laminate includes a plurality of power plane pairs, wherein the power plane pairs includes a power plane and a reference plane.” How does applicant meant of “at least one power plane and can be one power plane or at least one reference plane and can be one reference plane ”can be a plurality of power plane pairs?” Applicant should clarifies the claim language of “a plurality of power plane pairs” and how does “a plurality of power plane pairs” that relative to “at least one power plane or one power plane?”

Regarding claim 16, it is unclear. Applicant recites the “stiffener” but in figures 2, 4, and 5 of Species II do not shown. Applicant should verify all of the limitations of the claimed invention that would be shown in the drawings.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-2, 4-9, 13, and 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frankeny et al. (U. S. Patent 5,691,041) in view of Smith et al. (U. S. Patent 5,694,297).

As to claims 1, 4, 13, 15, 17, Frankeny discloses a system for delivering power to an integrated circuit as shown in figures 1-8 comprising:

an integrated circuit (1, column 3, line 24);

a printed circuit board (PCB-10, figure 5, column 4, line 23) including at least one signal layer (pad on board, not shown) for conveying signals to the integrated circuit; and

a power laminate (3, column 4, line 1) is arranged between the IC and the PCB (see figures 5-6) including at least one power plane (8, column 4, line 15) and at least one reference plane (7, column 4, line 15) for providing core power (16, column 4, lines 61-63) to the integrated circuit (1-figure 6), wherein the power laminate is separate from the PCB;

Frankeny discloses all of the limitations of the claimed invention, except for the power laminate includes a switching voltage regulator circuit and a plurality of decoupling capacitors mounted on the power laminate.

Smith shows a system as shown in figures 2-3 comprising a power laminate (108, column 5, line 6) having a switching voltage regulator circuit (116, column 5, line 14) and a plurality of decoupling capacitors (122) mounted on the power laminate.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a power laminate having a voltage regulator and decoupling capacitors as taught by Smith to employ the system of Frankeny in order to provide a DC-DC power voltage supply operates on an IC chip mounted on the power laminate and provide a minimize affect of parasitic inductance in IC chip.

As to claim 2, Frankeny discloses the system as shown in figures 1-8 wherein the PCB (10) does not provide core power to the integrated circuit (1).

As to claim 5, Frankeny discloses the system as shown in figures 3-4 wherein the power laminate (3) including an aperture (6) for allowing signal to pass from The PCB to the IC.

As to claims 6-9, Frankeny discloses the system as shown in figures 1-8 wherein the power laminate made of dielectric material (column 4, line 13), having ball grid array like a pattern of solder to cover lands (9, column 4, lines 20-23).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rowlette, Sr., Kresge et al., Dozier, II, and Menzies et al., disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


ALBERT W. PALADINI
PRIMARY EXAMINER

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November 22, 2002